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RELATION OF FIRST GRADE READING AND COMPOSITION.

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A STUDY WAS CONDUCTED TO DETERMINE THE RELATIONSHIP OF READING METHOD AND COMPOSITION AND TO DISCOVER A WAY TO EVALUATE FIRST- GRADE COMPOSITION. PARTICIPANTS WERE 779 LOW INCOME, FIRST-GRADE CHILDREN FROM SIX CITIES. THERE WERE NO SIGNIFICANT DIFFERENCES BETWEEN THE EXPERIMENTAL AND CONTROL GROUPS IN SOCIAL BACKGROUND, MATURATION, INTELLIGENCE, AND THE QUALITY AND EXPERIENCE OF THEIR TEACHERS. THE ONLY KNOWN VARIABLE BETWEEN THE TWO GROUPS WAS THE METHOD OF TEACHING. THE RESULTS FOR WORD AND PARAGRAPH MEANING ON A STANDARD TEST INDICATED A SIGNIFICANT DIFFERENCE IN FAVOR OF THE EXPERIMENTAL PHONICS GROUP. THE ANTICIPATED HIGH CORRELATION BETWEEN READING METHOD AND WRITTEN COMPOSITION WAS CONFIRMED. THE CHILDREN IN THE LOW INCOME AREAS COULD WRITE COMPREHENSIBLE COMPOSITIONS OF SEVERAL SENTENCES. IT WAS CONCLUDED THAT WRITING WAS A FEASIBLE EXERCISE IN THE FIRST GRADE AND WAS PERHAPS A DESIRABLE INSTRUCTIONAL TOOL FOR THE FIRST GRADE. THE INSTRUMENT DEVELOPED TO EVALUATE THE COMPOSITIONS WAS EFFICIENT AND RELIABLE. FOLLOWUP SUGGESTIONS AND SUGGESTIONS FOR FURTHER RESEARCH ARE PROVIDED. REFERENCES ARE LISTED. THIS PAPER WAS PRESENTED AT THE INTERNATIONAL READING ASSOCIATION CONFERENCE (BOSTON, APRIL 24-27, 1968). (MC)

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FIRST GRADE COMPOSITION AS IT RELATES TO TWO METHODS OF BEGINNING READING IN INNER-CITY SCHOOLS

Why Study Reading and Composition at Grade I?

In the past few years several research committees in language arts have encouraged researchers on all levels to tackle the evaluztion of composition and the correlation of composition with reading. The National Council of Teachers of English has repeatedly suggested that language arts research should provide evidence and criteria on which the language arts teacher can judge compositions from grades one through twelve (Burrows et. al., 1961). "Many teachers are confused," says Parke, " concerning what they are to do in integrated (language) situations and what separate teaching of skills should be done in a good language program. Efforts should be made to clarify answers to these questions more constructively." (Parke, 1959). In the primary grades, where language arts skills are often taught in an interrelated manner, it is especially important to know what the relationship is.

Loban demonstrated in his study that there is a correlation between reading and writing above grade three; that there is, in fact, a correlation among all the communication skills of listening, speaking, reading and writing. One might anticipate that such a correlation exists. But at this point in time, it is difficult to anticipate what kind of writing performance can be expected of children in the primary grades and what influence reading instruction has on their writing performance or vice-versa. In theory, at least, writing and reading are closely related skills, for reading and writing function through visual symbols, whereas listening and speaking use sound symbols. It might be hypothesized, therefore, that what enhances proficiency in reading contributes to proficiency in writing. It is one of the purposes of this study to investi-

gate whether or not this relationship exists. Our study sought to answer these questions:

1) Can a reliable instrument be established for evaluating first grade composition?
2) Are reading achievement and composition performance related at the first grade in inner-city schools?
3) Does the method of teaching beginning reading seem to influence children's performance in written composition?

Design of the Study

To answer these questions an exploratory study was designed

a) to see if there are differences in composition performance between an experimental reading group using synthetic phonics and a control group using a meaning-emphasis approach (analytic word attack method).*
b) to develop criteria and an instrument for evaluating first grade compositions.

Disadvantaged Children Were Used

Seven hundred and seventy-nine pupils from six cities were used as subjects for the study.**

The cities contributing to the sample were Catholic Archdiocese of Chicago, Illinois; New Orleans, Louisiana; Newport News, Virginia; Port Arthur, Texas; Richmond, Virginia; and Salt Lake City, Utah.

The subjects used in this study were chosen by the project directors in

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* The experimental group used the McQueen phonics program, published by the McQueen Publishing Company, and Open Court Reader 1:2, Reading Is Fun, Open Court Publishing Company. The control group used traditional basal programs. Readers published by Scott Foresman Company, Ginn and Comapny, American Book Company and Houghton-Mifflin Company were represented in the cities that constitute the sample population.

** This study used the same population as the Hegeler Project Reading Study. The Hegeler Foundation enabled the author to use the reading scores compiled by the project in this reading-composition study. Results of the Hegeler Project Reading Study are found in "First Year Report on the Hegeler Project Reading Study" published by the Hegeler Foundation, Box 399, La Salle, Illinois, 1966.

each of the participating cities. These directors were instructed to select their classes from the lower socio-economic area using their regular procedures for class assignments. No formal pressure of the socio-economic status of the subjects was applied, but the Pintner-Cunningham Primary Test, Form A, was administered to determine the I.Q. of the children. When the data for all the cities were combined, the total experimental group and the total control group differed by one point in I.Q. and by less than a month in chronological age, neither of which constitutes a significant difference. The I.Q. distribution of both experimental and control groups were normal, though the mean I.Q. of both groups was slightly low.

It is assumed, therefore, that there are no significant differences between the experimental group and the control group in social background, maturation, intelligence, and the qualifications and experience of their teachers. It is hypothesized, therefore, that any significant difference occurring in the subject's performance on the composition test will be related to the method of teaching reading--the only known variable differing between the two groups.

Statistical Tests

To test the correlation of reading and writing, the Pearson Product Moment Correlation formula and the point biserial correlation were used. To test the differences in means between experimental and control groups, the t-test for differences and the Kolmogorov-Smirnov Difference Statistic were used.

Level of significance

The level of significance chosen was .05.

Procedures

Procedures for the study were the following:

1. Cities were asked to participate in the experiment.
2. In September, classes were selected from the lower socio-economic areas of these cities. Local project directors selected comparable teachers

and students for the experimental and the control groups. The Pintner-Cunningham I.Q. Test was used to determine intellectual comparability.

3. In May the Stanford Achievement Test, Primary I, Form X, was administered. Also administered and evaluated was a composition exercise in the form of a dictated sentence and an open-end story to be completed in twenty minutes.

Summary of Findings

Reading scores

The Stanford Achievement Test was administered and two reading scores (word and paragraph meaning) were obtained for the entire sample (N - 779). The experimental subjects (phonics emphasis) for this composition study had mass reading scores significantly higher than the control subjects (meaning emphasis). On the Stanford Achievement Test, the experimental phonics group had a mean score of 24.1 for Word Reading and the meaning emphasis control group had a mean score of 17.5; the experimental had a mean score of 20.1 for Paragraph Meaning; the control had a mean score of 17.2. A t-test ratio indicated a significant difference in favor of the experimental group, (.001 level) that would occur by chance less than one time in a thousand.

Composition scores

The compositions were rated on a 1-5 scale for completeness and clarity of communication (See Table 1). Other measures of the compositions consisted of counting the instances of the following:

1) The number of correctly spelled words in an eight-word dictated sentence. (The tall man took the big ball home.)
2) The number of words attempted in the composition - fluency
3) Interesting content, i.e., the number of solutions or sequels presented - flexibility; ...original ideas, events, and expressions; ...use of rhetorical devices, such as questions and direct discourse; ...use of emotion - charged words such as afraid, laugh; ...awareness of environment - visualization

TABLE 1

CUMULATIVE FREQUENCY OF COMMUNICATION SCORES

Communication Score	Experimental f	Experimental cf	Experimental cp	Control f	Control cf	Control cp	D
5	56	393	1.000	12	386	1.000	-
4	81	337	.857	51	374	.968	.111
3	122	256	.651	99	323	.836	.185
2	76	134	.341	120	224	.581	.240
1	58	58	.147	104	104	.269	.122
	N = 393			N = 386			

Kolmogorov-Smirnov D statistic = .240

Chi square estimate = 44.8667; level of significance = .001 with 2 d.f.

Communication Rating Scale

5 - Superior

4 - Competent

3 - Fair

2 - Poor

1 - Failing

4) Vocabulary above grade 1

5) Vocabulary above grade 3

The means and standard deviations of all these composition measures are given in Table 2.

Is There A Correlation?

The hypothesis that there is a high correlation between reading and written composition at the first grade level was confirmed. (See Table 3) A product moment "r" of .675 was found between word reading and composition communication; .62 between paragraph meaning and composition communication. The correlation between paragraph meaning and fluency (number of words attempted in the composition) was comparatively low, "r" - .442. The point biserial test statistic indicated a significant relationship between reading method and scores on the composition communication rating scale (.001 level of significance).

Does The Reading Method Make A Difference?

The hypothesis that the experimental group would have a higher mean composition score than the control was confirmed at the .001 level of significance for the following measures: communication rating scale, the number of correctly spelled words on the dictated sentence, fluency and vocabulary. The hypothesis was rejected at the .05 level for the measure of interesting content. The difference in total content scores favored the experimental group, but it was not significant.

TABLE 2

MEANS AND STANDARD DEVIATIONS OF COMPOSITION EVALUATION CRITERIA

	Communication	Dictation	Fluency	Flexibility	Originality	Rhetoric	Emotion	Visualization	Cont. Total	Voc. Gr.1+	Voc. Gr.3+
Exp.											
N	393	393	393	64	64	64	64	64	64	94	94
X	3.00	6.54	24.29	.750	.312	.218	531	.968	2.78	6.39	2.54
SD	1.62	2.28	18.73	.883	.582	.413	.900	1.24	2.90	4.83	2.09
Con.											
N	386	386	386	63	63	63	63	63	63	81	81
XX	2.34	5.22	17.06	.603	.317	.444	.365	.698	2.24	3.41	1.69
SD	1.10	2.56	15.79	.702	.479	.751	.498	.902	2.89	3.26	2.16

TABLE 3

CORRELATION BETWEEN READING ACHIEVEMENT AND COMPOSITION PERFORMANCE AT FIRST GRADE LEVEL

Scores	N	r Value
Communication and Word Reading	779	r = .675
Communication and Paragraph Meaning	779	r = .620
Fluency and Paragraph Meaning	779	r = .442

Word Reading and Paragraph Meaning scores are from the Stanford Achievement Test, Primary I, Form I.
Communication and Fluency scores are from an author-devised rating scale.

Conclusions and Discussion

Limitations

A word of caution must be given concerning the limitations of the study. The test population came from low-income neighborhoods in urban areas, and the literature indicates that for these children neither their experiential background nor their performance on language-related tests can be expected to compare with that of children from more advantageous circumstances.

The cities participating in this study volunteered for the project. This fact may indicate some bias in favor of the experimental phonics program. There is no way of knowing whether these cities volunteered for purposes of objective research or because they felt some internal pressure to try a reading program containing one or more of the unique elements of the experimental readers. These elements are intensive initial phonics (synthetic phonics), emphasis on writing via copying and dictation, and stories drawn primarily from traditional children's folk tales and fairy tales.

This study did not attempt to isolate any of the factors within the reading methods, and so there is no scientific way of determining from this exploratory study whether one of the unique elements alone or the three in combination helped produce the superiority of the experimental group in reading and in composition. The reading methods in the control groups are traditional basal methods in the sense that they begin with an initial body of sight words and develop word analysis gradually and analytically. The stories in their first grade books center around the home, school and neighborhood.

Another factor that must temper the generalizations of this study is teacher selection. Local administrators selected teachers for the experimental program, and it is possible that they chose teachers who were most amenable to the reading philosophy contained in the experimental program.

Conclusions

Evaluation instrument

One of the steps necessary to the completion of this study was the construction of an evaluation instrument. One containing two parts was constructed. One part, a five point rating scale, evaluates communication; the other part enumerates instances of interesting content. The inter-scorer reliability of the communication rating scale was.77 on a single trial. No reliability study was made on the content total (interesting content). The content total section of this evaluation instrument needs more study and refinement. The reason for doubt is that the interesting content criteria failed to discriminate between the experimental group and the control group, although in other measures used there was a significant difference between the two groups. That fact, in itself, does not discredit the use of counting instances of interesting content as a criterion in evaluating primary grade writing. But it certainly holds in check any exuberance the author may have felt about solving completely the major problem of an objective evaluation of primary grade composition. On the other hand, there are possible reasons for expecting the experimental and control groups to have similar scores in the area of interesting content as will be discussed shortly.

In many ways the instrument or the criteria used in this study to evaluate composition proved to be quite practical. To accomplish its purpose and be useful to the classroom teacher, the instrument had to be quick and easy to administer. The raters found that they could rate communication, count interesting content and count the total number of words (fluency) in one to four minutes per paper, depending on the length and clarity of the composition.

Correlation of reading and writing

Concerning the hypothesis that reading and writing are highly correlated, it was seen that in this first grade study word reading scores and paragraph meaning scores were correlated with the composition communication scores at

.67 and .62 respectively. This result confirmed the hypothesis and corresponded to the findings in other studies.

One correlation that did not meet the prediction of a high correlation was the .42 "r" between paragraph meaning and fluency in writing. A partial explanation of this low correlation may revolve around the rather frequently occurring compositions that had very few ideas but many words. Some children repeated words again and again -- probably in an effort to fill out the time allotted for writing their compositions. Thus the composition that read "Timmy fell down and down and down and down and down and down and down and down and down and down."

Of most importance to this study was the significance of the correlation between reading method and composition. It was found that the reading method (experimental and control) had a high correlation with written communication (a rpb significantly different from zero at .001 level). This statistic provides a strong argument a) for the effectiveness of the distinguishing elements in the experimental program in improving composition skill and b) for the reliability of the communication rating scale in distinguishing between the experimental and control groups.

Results that favor experimental group

Concerning the hypothesis that the experimental group would have a higher mean score than the control group, the hypothesis was confirmed in several areas of composition. It was found that the experimental group achieved higher scores in fluency, dictation, communication and vocabulary. These differences were significant at the .001 level. See Table 2.

Some possible reasons

1) An initial intensive phonics training as provided by the experimental method trains the child from the outset to associate letter symbols with speech sounds. This sound-symbol patterning could free the child to attempt in writing the words whose sounds he can analyze. This might be one reason, for example,

why the experimental children were significantly more fluent than the control children. This assumed freedom might also account for the larger vocabulary used by the experimental children. Even the higher scores on spelling words correctly in the dictated sentence could be traced to the use of this sound symbol patterning that was part of the experimental method. The control children were not necessarily trained to think consistently of letter arrangements within the words.

2) The built-in emphasis on writing in the experimental method may have contributed to the success of the experimental group. Writing practice, in fact, may be the key element in these reported differences. The validity of this statement may become more apparent when the lack of difference in content total scores are discussed. If it can be assumed that language learning is the result of habit and practice, then it stands to reason that the group that gets more practice in one kind of language learning will score higher than a comparable group not having as much practice. The experimental method emphasized writing from the outset of instruction in reading. Writing the letter symbols as a means of reinforcing the sound-symbol relationship constitutes part of the methodology of the experimental program. Quite early in the first grade, the experimental method calls for the pupils to write words and sentences from dictation. This practice could make a child more fluent and free to write what he would say if given the chance to tell his story.

What Does This Mean For Language Arts Instruction?

With the tentative findings provided by this exploratory study one can make certain speculations about research and guidelines in language arts instruction. Here are some recommendations which apply to disadvantaged children in urban areas and only by inference to other populations:

1. Replicate this study with certain modifications: ... isolate each of the three unique elements of the experimental method, i.e., intensive initial phonics instruction, emphasis on writing, story content drawn from

children's classics.

... get a more accurate determination of the socio-economic status of the subjects with an instrument such as the Minnesota Parent Occupation Inventory.

2. Conduct a similar reading-composition study among children of more favored economic conditions.

3. Provide for the orderly introduction of composition skills starting in grade one. Certain basic communication forms, such as the simple narrative, can be introduced early in the primary grades and can be written by the average child.

4. Start the writing sequence with copying exercises, then dictation, and finally original composition.

5. Reinforce reading with writing exercises. Writing can be used to reinforce vocabulary, concepts, or the study of the structure of the piece that was read.

These recommendations are not necessarily new or different from what appears in other works, but the focal point for curriculum planning here is the first grade. If the theory and actual demonstration of the interrelatedness of reading and writing have any merit, it seems that writing should be given a structured part in the first grade curriculum and should not occupy merely an incidental time segment devoted to "creative things."

Conclusions

The purposes of this study were to determine the relationship of reading method and composition, and to find a way of evaluating first grade composition. On a population of 779 low income first grade children it was found that reading and writing are correlated at the first grade level and the experimental method (synthetic phonics) scored significantly higher than the control (analytic word attack) in both reading achievement and in composition performance. It was found that those children in low-income areas could write comprehensible compo-

sitions of several sentences, thus making writing a feasible exercise in the first grade and perhaps a desirable instructional tool for the first grade.

The instrument for evaluating these compositions was found to be efficient and reliable for evaluating communication in written composition.

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